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ABSTRACT

Faculty beliefs about educational purpose and the nature of their academic field strongly influence how they plan introductory courses. Significantly different conceptions of educational purpose among faculty in different fields may inhibit agreement on plans for curricular coherence and ways of communicating expectations to students. Interviews with 89 faculty members teaching in diverse colleges and representing eight fields also identified faculty attention to student preparation, available textbooks, and locally important factors, but little attention to alternative instructional strategies during course planning. The development of a tentative general model of course design and related questions to guide future study, based on the findings, is discussed. Nine tables of data from the interviews are appended, as is a schematic of the contextual filters model of course design. Contains 25 references. (Author/KM)

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Influences on Course Planning

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INFLUENCES ON COURSE PLANNING

Abstract

Faculty beliefs about educational purpose and the nature of their academic field strongly influence how they plan introductory courses. Significantly different conceptions of educational purpose among faculty in different fields may inhibit agreement on plans for curricular coherence and ways of communicating expectations to students. Interviews with 89 faculty members teaching in diverse colleges and representing eight fields also identified faculty attention to student preparation, available textbooks, and locally important factors, but little attention to alternative instructional strategies during course planning. Based on the findings, the authors have developed a tentative general model of course design and related questions to guide future study.

INFLUENCES ON COURSE PLANNING

Educators are debating ways of ensuring "coherence" and "integrity" in the college curriculum. Such debates are based, in part, on recent reports suggesting varied strategies to achieve these goals. For example, a report from the National Institute of Education (NIE) stated that colleges should require more general education courses, clarify expectations, and encourage students to become more involved in learning (National Institute of Education, 1984). At least one national report has implied that patterns of college coursework emphasizing the humanities will help students achieve desired outcomes effectively (Bennett, 1984). Still another report maintains that the specific courses taken are not as important for curricular coherence as the experiences of students within their varied academic programs (Association of American Colleges, 1985). Concurrent with these diverse prescriptions for improving the college curriculum, many policy makers have echoed the NIE study group's view that measuring student outcomes will encourage colleges to improve learning experiences for students.

These improvement proposals -- advocating augmented general education, strengthened humanities programs, clarified expectations, and increased measurement of student outcomes -- emphasize changes in institutional practices or broad patterns of student coursetaking. Although comprehensive reforms

should not be neglected, it is also important to improve coherence within individual courses where the structure for much academic learning is established. It is for classroom settings that faculty members usually plan and teach courses in ways that they believe help students learn facts, principles, ideas, attitudes, skills, and ways of thinking. Like the writers of the national reports, most faculty members intend their work to result in an academic program with coherence and integrity for the students. When course-level expectations instructors currently have for their students, the course plans they construct, and the outcomes they hope students will achieve are more fully understood, it will be easier to address issues of instructional quality raised by recent national reports at the program and institutional level. Arguably, the foundation of collegiate curricular change is at the course level.

Theories about how students learn reinforce the importance of understanding how academic courses are planned in order to facilitate broader programmatic change. Cognitive psychologists tell us that meaningful learning requires students to integrate new information into existing knowledge structures. These findings have spawned speculation that the way instructors arrange course content may influence student learning. If so, each course, as well as entire programs, should be planned to possess coherence and integrity.

According to cognitive learning theorists, students also learn more effectively when they understand the reasons underlying instructional tasks and consciously select appropriate learning strategies. This implies that teachers and students should share a common understanding of the learning objectives and how the instructor expects them to be achieved. From a different perspective, this notion reinforces the idea that teachers should make their expectations clear for students at the course level as well as the program level.

Do faculty members have clearly focused academic intentions and plans for their courses? Could these plans be communicated to students in ways that foster understanding of the learning tasks? Could student intellectual growth be enhanced if faculty made their plans and intentions more explicit? Could students learn more, learn more effectively, or learn more efficiently if faculty arranged course content differently within courses as well as within entire programs? The foundation for answering these questions must be laid by examining faculty intentions when they design courses. Unfortunately, little research evidence exists about how college instructors select and arrange course content.

The purpose of this study was to explore how faculty members from several fields plan introductory courses and to identify factors that influence their planning. Introductory courses were chosen as the study focus because general

education programs recently have been criticized intensely as lacking coherence. The research presented in this paper was undertaken in order to construct a survey instrument to be used nationally to study course planning among a respresentative group of college faculty. Understanding how the plans of faculty are communicated to students was a secondary focus of our research and will be addressed in other articles.

RELATED LITERATURE

Although studies of teacher planning at the K-12 level began in the United States about a decade ago (Clark and Peterson, 1986), only Australian researchers have reported such studies at the college level (Andresen, Barrett, Powell and Wieneke, 1985; Andresen, Powell and Wieneke, 1984; Powell and Shanker, 1982). These studies of a few college professors and their classes have focused more on the teaching tasks than on the course planning process.

While the research focusing directly on course planning in higher education is limited, much literature implies that course planning by college teachers is closely related to discipline-embedded assumptions and beliefs as well as to the socialization of faculty members in varied fields (Dressel and Marcus, 1982; Gamson, 1966; Snow, 1959; Stark & Morstain, 1978). The Australian investigators retrospectively judged that their design had included insufficient attention to the

instructors' disciplines. Thus, the basic framework for our investigation built on theoretical discussions about the dimensions of disciplinary differences (Confrey, 1981; Dressel, 1980; Dressel & Marcus, 1982; King & Brownell, 1966; Phenix, 1964; Schwab, 1964). Although we assumed that other factors, such as college mission and student characteristics, would be important, the degree to which they influence course design was initially much more speculative.

STUDY QUESTIONS

The questions posed in the study were:

1. What factors influence faculty in planning introductory courses?
2. How strong are various influences on course planning?
3. Do course planning influences and course designs differ for faculty in various disciplines and in different institutional settings?

We defined college course planning as the decision making process in which instructors select content to be taught, consider various factors affecting the teaching and learning process, and choose from among alternative strategies for engaging students with the content. In this context, course planning is assumed to mean decisions that instructors undertake before the first class meeting and the explicit or implicit statements of objectives and strategies that result. Some investigators have referred to this domain as

"pre-active" planning. When a course has been taught previously, the feedback that informs changes made prior to the next class may also be considered part of course planning.

METHOD

Overview

To increase understanding of introductory college course planning, we conducted interviews with faculty members from diverse fields to identify factors that influence them. We interviewed 89 faculty members at eight institutions about planning a specific course. The institutions included three community colleges, two liberal arts colleges, two comprehensive universities, and one doctoral university. The courses selected for inclusion were introductory courses in biology, business administration, composition, history, literature, nursing, mathematics and sociology. This range of courses spanned several major categories of academic pursuit and included two career preparation programs frequently offered at both two and four year colleges. The faculty interviewees were selected by a cooperating administrator at their institutions as "typical" of instructors who taught the specified courses.

Interview Methods

The interviews were guided by a protocol derived from integrating prior theories about course design.[2] These

theories included a linear course design model by Posner and Rudnitsky (1986), the ideas set forth by Schwab (1969) about commonplace elements of curriculum (student, teacher, subject, and milieu) and the work of Toombs (1977-78) specifying three major aspects of curriculum design (content, context and form). The protocol specified data elements potentially influential in course design, and thus worthy of collection in this study. For example, we expected that decisions about course form, such as content selection and content arrangement, are influenced by faculty educational assumptions. In turn, we speculated that faculty educational assumptions are affected by 1) content influences such as discipline characteristics; and 2) context factors such as college goals, program goals, student chararacteristics, faculty characteristics, and local internal and external influences.

Within this broad scheme, we also drew upon existing theories to probe specific influences on course planning. For example, faculty beliefs about education were explored based on an adaptation of the conflicting curricular conceptions developed by Eisner and Vallance (1974). Methods of arranging course content were explored by expanding upon the sequencing categories originally developed by Posner and Strike (1976). In listening for various characteristics of the academic disciplines, the interviewers were guided by discipline components discussed by Dressel and Marcus (1982) who had built on the work of Phenix (1964). We listened for mentions

of the discipline's mode of inquiry, its relation to other disciplines, and its symbolic system, as well as its substantive aspects. We asked faculty to characterize their disciplines based on a scheme proposed by Dressel and Marcus (1982).

In ninety-minute interviews, faculty members first answered general questions intended to solicit unprompted responses and then structured questions to provide reactions to selected possibilities in course design. Structured questions included card sorts and assignment of points to items according to relative importance. In all cases, faculty respondents were asked to "think aloud" as they completed the structured questions.

With the permission of the participants, and assurance of anonymity, interviews were tape recorded for later analysis while the interviewers simultaneously coded responses on an interview protocol. When analyses for all included colleges were complete, participating faculty members were invited to participate in follow-up seminars held at their colleges to discuss and react to the general findings from the interviews.

RESULTS

The results are presented in two sections. Section I describes the faculty interviews and the information gained from them about course planning. The order of presentation of the data corresponds to the order of the study questions

listed early. First, aggregate results are provided for all faculty interviewed, then differences by college type and by academic field are noted. Using a generous level of statistical significance (.10) appropriate to an exploratory study, we compared course planning influences and processes for faculty in various disciplines and in different institutional settings. In Section II we organize the findings into a tentative model of course design amenable to additional testing. This model is now being used to guide analysis of the survey resulting from this exploratory study as well as the design of a parallel study concerned with planning of academic programs.

I. FACULTY INTERVIEWS

Usable interviews were obtained with eighty-nine faculty members representing eight types of introductory courses in eight institutions representing four Carnegie types. The distribution of the interviews by academic field and type of institution, as well as some parameters of the introductory courses on which the interviews focused are given in Table 1. Within the limitations of the programs offered at the several colleges, the distribution of introductory courses was similar across the various types of colleges. Slightly larger classes were typical of courses offered in the larger institutions. Most introductory courses were taught either totally or primarily by lecture methods. The significant exceptions were English composition and literature for which discussion

English composition and literature for which discussion techniques were more often used.

Table 1 goes about here

The mean age of the faculty members interviewed was 46 years, the average length of time they had taught in college was 15 years, and nearly all faculty had taught the introductory course four or more times. The sample of faculty interviewed was 41% female, higher than the percent of women among faculty generally, probably because English composition and nursing tend to be taught by women. In Table 2, we show the demographic characteristics of the faculty sample and a summary of those faculty characteristics that differed by college type and by academic field taught. As might be anticipated, there were differences among the eight academic fields and the four types of colleges on a number of faculty characteristics such as sex, the amount of non-teaching experience, the degrees held, and research articles published.

Table 2 goes here

Course Planning Influences

Faculty members were asked, "Tell me about what you do as

you plan this introductory course?" and "What things do you believe influence you as you plan the course?" Later, interviewees were given cards with various influences and asked to sort them to indicate their relative importance. To estimate the strength of various influences on course planning, we used both our judgments of the emphasis they gave in open-ended questions and their answers to the specific probes.

Tables 3 and 4 go here

While Table 3 compiles those influences faculty mentioned in response to open-ended questions, Table 4 cites the mean number of points out of a possible one hundred points faculty members allocated to various factors in a more structured question about the strength of influences. As shown in both Tables 3 and 4, faculty members are strongly influenced in course planning by the characteristics of the discipline they teach and by their own backgrounds, including their beliefs about the purposes of education. Frequently, faculty members said it was difficult or impossible for them to separate their discipline, their background, and their beliefs. Such statements seemed to attest to the strength of faculty socialization in their fields. As we listened to faculty describe these influences, we sensed that other important influences within the specific teaching environment, such as

student characteristics, may be superimposed upon these background factors.

For example, while describing their first steps as selecting content from their field or choosing course materials, many faculty emphasized that student characteristics influenced these selections. Most also said they were influenced by the textbooks available. Overall, however, they rarely mentioned making choices among alternative instructional strategies. Thus, using Toombs' categorization, instructors' comments centered primarily on content, modestly on context, and only peripherally on course form.

In specific situations, faculty members mentioned program goals, college goals, and objectives of external groups (such as accreditors or state agencies) as influential in their planning. For example, at a college with a religious mission, college goals were strongly influential. In a program such as nursing that is responsive to both a professional accrediting agency and state-level examinations for graduates, program goals influenced by these external sources, in turn, influenced course planning. Most faculty, however, did not attribute strong influence either to program goals or college goals.

According to the faculty members we interviewed, the views of instructional experts, feedback from previous

classes, research modes from the disciplines, and local pragmatic factors seldom are important influences on faculty members in course planning.

The influences that faculty frequently mentioned spontaneously (discipline, student characteristics) also were rated important in the more structured probe. When posing more structured questions about influences on course planning, (See Table 4) we deliberately included some items that faculty rarely mentioned in response to open-ended questions (such as resources and external constraints). Faculty responses confirmed that these influences were probably not mentioned because they lack importance to faculty.

Table 4 goes about here

Differing Influences among Academic Fields and College Types

After coding faculty members' open-ended responses to questions about course influences, we noted a substantial number of differences among faculty teaching in different types of institutions and relatively few differences among academic fields taught (See Table 3). In contrast, when we compared responses from questions in which faculty ranked the importance of specific influences, differences by academic field seemed more notable than differences by type of

institution (Table 4). The reason for the different findings when the question is posed in two ways is not clear. We hypothesize, however, that local contexts were foremost in faculty members' minds as they initially thought aloud about course planning. When broader considerations were introduced by the investigator, faculty members may have judged local factors as relatively less important.

We tried to understand the underlying bases for differences among academic fields by comparing responses to four probes that followed the questions about course planning. In these four sets of structured questions, we explored 1) the way faculty members defined their academic fields, 2) their beliefs about the purpose of education, 3) the reasons why they would select particular content, and 4) the ways they prefer to sequence that content.

Faculty members were asked to

1) choose and rank order the three best definitions of their field from a list of seven,

2) rank order six paragraphs describing different beliefs about the purpose of education,

3) rank order nine cards describing reasons for selecting course content and assign a total of 100 points to the cards to indicate their relative importance,

4) rank order six methods of arranging course content.

Faculty in the fields represented in our sample could be

roughly separated into two groups based on the characteristics they attributed to their academic field (Table 5) and their related beliefs about educational purpose (Table 6). Although our sample was not sufficiently large and representative to confirm this finding, we expect that these two groups may become even more distinct when information about how they choose and arrange course content is also considered.

One group of faculty characterized their fields as disciplines, consisting of sets of concepts, principles, ideas, phenomena, or objects to be explained to students. They reported planning their courses to teach these concepts and principles, while simultaneously trying to help students become effective thinkers and/or social change agents. History, biology, and sociology are examples of such fields.

A second group of faculty members believed their fields are not appropriately characterized as disciplines. These instructors, most frequently teaching composition or literature, generally described their field either as consisting of an interrelated set of values or interests, or as a group of people who share pursuit of those values and interests. This group of faculty tended to see their role as promoting student growth, skill acquisition, or personal enrichment.[3]

Tables 5 and 6 go here

Differences among faculty by academic field and college type in the way they characterized their disciplines are shown in Table 5 and in their choices among educational purpose statements in Table 6. The comparisons show more differences in faculty educational beliefs and the way they view their discipline by academic field than by institution.

In selecting introductory course content, many faculty members choose material that represents fundamental disciplinary concepts, helps students add to their cumulative knowledge, helps them integrate their ideas, or stimulates them to search for meaning (Table 7). In contrast, most faculty members explicitly rejected the idea that they would choose content because students will enjoy it or will learn it readily. For introductory courses, most instructors also felt that it is premature to choose material specifically because it acquaints students with methods of inquiry in their field. In their view, such material is best included in more advanced courses. The relative importance attached by faculty respondents to these influences on choosing content is shown in Table 7, along with summary comparisons by institutional type and academic fields. In selecting content, there

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Table 7 goes about here

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were no differences among college types, but we detected differences among academic fields. Specifically, those fields in which faculty see their discipline as consisting of concepts to be transmitted to students differ from those less structured fields in which faculty hope that they can encourage students to search for meaning.

How Faculty Arrange Course Content

Based on correlations in this small sample, faculty members seem to arrange course content in ways that reflect both their views of their academic fields and their beliefs about educational purpose. Their preferred methods of sequencing, which exhibit more rank order differences by academic field than by type of institution, are shown in Table 8. Table 9 provides correlations between faculty members' preferred methods of arranging content and other variables described previously, such as the faculty members' characterizations of their disciplines, their educational beliefs, and their educational backgrounds.

Table 8 and 9 go about here

In some cases the specific methods of arranging course content chosen by faculty members in different academic fields

were not surprising. The most obvious illustration is that every history professor chose structural sequencing (specifically, chronological treatment of subject matter) as the preferred method. To cite another instance, instructors in applied fields, such as nursing and business, were least likely to choose sequences based on knowledge creation.

The correlation patterns in Table 9 hint that, with a larger and more systematic sample, regression models can be developed that predict faculty preferences for arranging content from their discipline and associated educational beliefs. We hypothesize that the most common pattern will be associated with the belief that the academic field is a set of concepts and operations. In this case, faculty arrange content in ways intended to help students integrate ideas from the discipline into abstract principles and, for these faculty members, textbooks tend to be important as organizers. In a second common pattern, faculty beliefs link the importance of education for personal enrichment with a view that either a set of interrelated values or an inquiry into meaning is to be pursued. Because of the individualized nature of this second pattern, textbooks are of relatively little importance; student characteristics are seen as important determiners of instruction.

Although we found these two fairly distinct groups of faculty in our sample, one of which emphasized student growth more frequently than the other, most instructors did not

believe that subject-centered education and student-centered education are two ends of a continuum. While each group of faculty tends to attribute slightly more weight to one of the two orientations, all believe both goals are important.

II. Developing a Tentative Model of Course Planning

Based on our findings in this exploratory study we developed a tentative "Contextual Filters Model of Course Design." (See Figure 1.) The model posits that faculty members' views of their academic fields, their backgrounds, and their assumptions about educational purpose interact to form a "discipline-grounded" perspective that initially exerts a strong influence on course planning. Subsequently, we hypothesize that specific characteristics of the instructional setting act as "contextual filters," modifying, in varying degrees, faculty members' views. Building on the interaction of the discipline-grounded perspective and salient contextual factors, instructors can begin course planning at one or more decision points. Planning proceeds in a non-linear fashion in ways that remain to be clarified but selection of subject matter is likely an early step for many faculty.

Figure 1 goes about here

Since the relationships in this model form a set of interrelated hypotheses subject to empirical test, we are developing the model further, hoping to culminate with a

general model of collegiate course planning. Currently, we have fielded a survey of a 10% random national sample of teaching colleges that includes introductory courses in twelve diverse fields. The survey, which has been constructed to expand upon information we obtained from the interview study reported here, should enable us to be far more precise about the strength and relationships of course planning influences. Through regression and cluster analyses we expect to be able to characterize several patterns of course planning among faculty in various academic fields and to determine the extent to which the type of college may modify these discipline-based patterns.

SUMMARY

In our interviews with faculty members, the ideas of earlier theorists that conceptions of both educational purpose and process vary by discipline were reinforced. Clearly, faculty members plan their courses according to operating theories about the nature of knowledge in their field and how best to share it with students. It is not easy to sort out, however, the extent to which these working theories are influenced by the discipline itself, the graduate school socialization process, or the characteristics of individuals attracted to certain fields of study. Nonetheless, the combined effect of these three factors seems sufficiently strong to suggest that profiles could be constructed

representing the "usual patterns" of course planning for specific academic fields.

Although the assumptions that faculty members initially hold surely are modified by the instructional setting, the beliefs that underlie course planning seem very enduring. Disentangling the discipline-related beliefs from contextual factors becomes more difficult when one extends the scope of inquiry beyond the traditional pure disciplines to career-preparation programs such as business, nursing, engineering, and education. In these fields, perceptions of professional practice and the socialization of students new to the profession must be considered as well (Stark, Lowther and Hagerty, 1987).

Despite the strength of faculty belief systems and implicit theories that undergird course planning, we found substantial modifications in patterns based on local contexts. Thus, we believe it is an oversimplification to argue that certain faculty assumptions translate rather directly into a course structure or teaching style (Dressel and Marcus, 1982). Similarly, although personal characteristics of teachers are certainly important in determining course plans and teaching style, we think discipline socialization in the academic field may be at least as important as personal traits in determining instructional style. There is a great deal more to learn about why some of the categories of influences we have called

"filters" in our model have salience for some faculty and not for others in the same setting.

Within the bounds of their discipline and context, faculty members seem to consider an extremely modest number of alternatives in planning introductory courses. We observed that the small number of faculty members who reported an active role in their discipline associations or were currently pursuing doctoral study often considered alternative teaching styles based on new information in the field. Faculty without doctoral training in the discipline more often had preparation in education and sometimes reported pre-college teaching experience. For faculty with these backgrounds, alternatives in course design were more likely to involve teaching strategies and sequencing. The extent to which these patterns exist in a larger and more representative sample is currently unknown. It appears, however, that availing oneself of opportunities to participate in education courses or instructional workshops may itself be discipline-related. Such participation often depends upon encouragement from a graduate school mentor or planned incorporation in a graduate program. Conversely, too, some faculty members reported even brief ventures into educational or psychological courses to be quite unsatisfactory. As a result, they reported a negative view of the utility of such knowledge.

Because of several recent reports that cite discontent and alienation among faculty members, we deliberately explored the

extent to which faculty members felt constrained or discouraged about their teaching. Although we included items to probe for both constraints on course planning and on content arrangement, we found very little evidence to support Seidman's (1985) conclusion that faculty in community colleges feel constrained, despondent, or alienated. To the contrary, we noted considerable interest and enthusiasm about teaching among most faculty members interviewed. We believe that where discontent does exist, it may center more directly on working conditions, salaries and reward options than on the teaching aspects of faculty work.

Limitations

This study was subject to many of the limitations typical of an exploratory study designed to develop grounded theory and instrumentation for more systematic research. Several of these limitations resulted in refinements to the survey instrument now in use. For example, during the interviews and feedback sessions, we observed that neither the set of educational belief statements (initially based on the work of Eisner and Vallance, 1974) nor the types of course sequencing patterns (initially based on the work of Posner and Strike, 1976) were sufficiently comprehensive for use in higher education. We introduced two additional belief statements, one to reflect the community college mission of vocational preparation and the other the religious college mission of developing values and commitment. We also added parallel new

statements reflecting the potentially strong influence employer requirements or a college religious mission might have on content arrangement. Since we have not yet explored planning with faculty members in humanities and fine arts (other than English composition and literature), additional beliefs may yet emerge.

In a number of interview probes, we used rank order techniques which restricted the degrees of freedom. This technique of forced choice was deliberately selected to cause the instructors interviewed to describe their reasoning process and indecisions. Likert-type scales in the resulting survey will probably reflect more accurately the multiple perspectives faculty hold and reduce the sharpness of distinctions among educational beliefs and course sequencing strategies.

Although some planning for new courses was involved, this study included mostly experienced faculty members who frequently were routinely maintaining their existing courses. Our encounters with a few new instructors, concerned about developing their identity as teachers, suggest that college faculty members may be most open to considering alternatives during formative stages of their careers. In the much larger survey sample, we expect data from a sufficient number of new faculty to permit us to understand better how their planning differs from that of experienced faculty.

As faculty spoke to us about their course planning, we

sensed the value of self-reflection about the planning process. Some faculty members were able to articulate the reasons why they chose certain course materials, content, or structures; others gave little evidence of having reflected on their decisions. This observation poses a set of new research questions, such as: What are the factors that contribute to self-reflection about course planning? Do reflective and non-reflective faculty differ in teaching effectiveness or satisfaction with teaching?

IMPLICATIONS

Discussions with faculty members reinforced our experience and the reports in related research that distinct cultures are strongly embedded. We found, for example, that frequently used terms such as "mode of inquiry" and "search for meaning" had specific discipline-connected interpretations. For useful discourse within a faculty, it is necessary to accept the possibility that there are many ways to "inquire." Faculty sometimes need to be reminded that their colleagues' differing perspectives stem from different underlying beliefs.

This observation raises the question of whether some types of instructional design seminars or workshops produce better results if limited to faculty whose customary course planning patterns are similar. Surely when faculty beliefs about education diverge substantially as, for example, with

teachers of literature and biology, institutions may generate more heat than light by attempting to sponsor generic workshops. For small colleges particularly, it might be more effective to join with other nearby colleges in sponsoring instructional development assistance by field. On the other hand, when a workshop's purpose is to raise consciousness about alternatives, it might most productively involve very diverse groups.

Faculty members expressed appreciation for the opportunity to reflect on their course planning procedures and said it raised issues they seldom deliberated. In addition, when responding to external evaluators of our research, some faculty members indicated that they made use in the classroom of ideas gained from the interview. Thus, such interviews may provide a useful form of faculty development. Based on our experiences in providing feedback to faculty participants under several types of arrangements, we believe faculty development discussions using material from these interviews can be productive if conducted with small groups of faculty who previously have been engaged in the interviews. Further refinement of interview materials and findings for use on campuses might include sessions where faculty pairs interview each other, followed by a broader discussion.

We noted the general lack of awareness of instructional theory among faculty members interviewed. The few who cited

learning theorists or experimental work mentioned ideas that educators and psychologists now consider out-dated. Apparently, there is a substantial time lag in applying contemporary educational advances to college teaching. Even so, in several discussions, reference was made to individuals with credibility and the capability to bring new knowledge about teaching to faculty members. This concept of "translator" suggests a number of questions. What makes an effective translator? Who are the individuals in various fields that can translate educational theories into practical knowledge? Can their contributions be encouraged or developed?

Our interviews provide some evidence for the notion that faculty members teach as they were taught. Yet, the reasons for this modeling may rest more on the nature of the discipline and accompanying beliefs about education than on the imitation of specific teacher role models. In our current survey we have introduced a specific question about teaching models that may shed light on this issue. A related practical question is whether graduate teaching assistants' experiences should include an emphasis on instructional design, including an examination of the relation of discipline characteristics to course design.

It seems important to understand more fully the low status accorded to "experts about teaching" in professorial circles.

To gather "circumstantial" evidence on this issue, we have included faculty members in educational psychology and psychology in our current survey. We wonder if their course planning patterns will be unique? Will they view "instructional experts" in a more favorable light than their colleagues in other fields view them?

As with many exploratory studies, this research has raised as many questions as it answered. Some questions particularly important to both basic and institutional researchers are mentioned here.

Can instructional improvement programs for experienced faculty succeed if they attempt to change basic beliefs about education that have been acquired through long years of faculty socialization? Or, if the way college instructors plan courses is subject to influence, are such influences most effective during a formative period?

Might institutions develop successful instructional improvement efforts by encouraging faculty to include new types of information in their planning? Consideration of the "filters" in our tentative contextual filters model suggests the possibility of focusing faculty attention on the availability of potentially useful information they do not currently use. For example, a college might encourage vigorous discussion of program goals or it might improve communication about student characteristics. Varying the strength and

salience of such influences has the advantage of avoiding challenges to strongly held beliefs but holding potential for producing incremental changes tailored to the specific campus and academic field.

Would longitudinal studies of new college instructors as they learn to develop planning strategies be useful to ascertain the source of beliefs and practices exhibited by experienced teachers?

CONCLUSION

A coherent educational design seems to require at least three elements: a suitable plan must be constructed by experts in the academic field; the plan must be communicated effectively to students; and students must possess capabilities and motivations needed to carry out the plan successfully. This study has been one of the first to explore the rationale and influences for construction of a suitable plan at the course level. Additional studies with national samples of faculty to verify these results and extend them to the level of program plans are underway. Eventually, research is needed that measures educational outcomes at both levels as each of these three elements (the plan, its communication to students, and the effect of student characteristics) are varied.

At the course level, faculty members feel strongly that they currently devise coherent plans to accomplish their purposes. Because of differing definitions of the purpose of

general education, they are less certain about how varied courses link together into an integrated set for students, what expectations should be firmly established for students, and how student involvement should be fostered. Thus, agreement on defining coherence at a program or college-level as suggested in various national reports may be difficult to achieve.

FOOTNOTES

[1] This article is derived from a report of the National Center for Research to Improve Postsecondary Teaching and Learning (NCRIPTAL) at the University of Michigan under OERI Grant No. G008690010. The studies described are from the NCRIPTAL Program on Curriculum Influences and Impacts. The opinions expressed are those of the authors. The authors appreciate the assistance of Sally Smith Bomotti, C. Lynne Haven, and Gretchen Martens with various aspects of this study.

[2] The interview protocols, a detailed discussion of the rationale for inclusion of each question, and the method of coding responses are available in a technical report (Stark, Lowther, Ryan, Bomotti, Genthon, Haven and Martens, 1988).

[3] Similar differences between literature teachers and others have been found independently by Naveh-Benjamin and Lin (1987) as they worked with faculty members and students to measure the effects of explicitly teaching the instructor's cognitive structure to students. In their experiment, students in literature classes showed smaller gains in cognitive organization, less movement toward the instructor's cognitive frame, and opposite correlations of grades with cognitive organization when compared with students in psychology and biology classes.

REFERENCES

Andresen, L., Powell, J., and Wieneke, C. (1984). Methodological issues in qualitative research: Lessons from a project. Research and Development in Higher Education, 7, 117-122.

Andresen, L., Barrett, E., Powell, J., and Wieneke, C. (1985). Planning and monitoring courses: University teachers reflect on their teaching. Instructional Science 13, 305-328.

Association of American Colleges (1985, February). Integrity in the College Curriculum: A Report to the Academic Community. Washington: D.C. Association of American Colleges.

Bennett, W. (1984). To Reclaim a Legacy. Washington, D.C.: National Endowment for the Humanities.

Clark, C. and Peterson, P. (1986). Teachers' thought processes. In M. Wittrock (Ed.), Handbook of Research on Teaching (3rd edition), pp. 874-905. New York: Macmillan.

Confrey, J. (1981). Conceptual change analysis: Implications for mathematics and curriculum. Curriculum Inquiry, 11 (3), 243-257.

Dressel, P. (1980). Improving Degree Programs. San Francisco: Joseey-Bass.

Dressel, P. & Marcus, D. (1982). Teaching and Learning in College. San Francisco: Jossey-Bass.

Eisner, E. W. and Vallance, E. C. (Eds.) (1974). Conflicting Conceptions of Curriculum. Berkeley: McCutchan.

Gamson, Z. F. (1966). Utilitarian and normative orientations toward education. Sociology of Education. 39, 46-73.

King, A.R. and Brownell, J.A. (1966). The Curriculum and the Disciplines of Knowledge: A Theory of Curriculum Practice. New York: John Wiley.

National Institute of Education Study Group on the Conditions of Excellence in American Higher Education (1984). Involvement in Learning: Realizing the Potential of American Higher Education Washington, D.C.: National Institute of Education.

Naveh-Benjamin, M. and Lin, Y. (1987, August). Development of cognitive structures in university courses and their relations to students' study skills, anxiety and motivation. Paper presented to the American Psychological Assocation. New York City.

Phenix, P. (1964). Realms of Meaning: A Philosophy of the Curriculum for General Education. New York: McGraw Hill.

Posner, G., and Rudnitsky, A. (1986). Course Design: A Guide to Curriculum Development for Teachers (3rd ed.) New York: Longman.

Posner, G., and Strike, K. (1976). A categorization scheme for principles of sequencing content. Review of Educational Research, 46 (4), 665-689.

Powell,J.P. and Shanker, V. S. (1982) The course planning and monitoring activities of a university teacher. Higher Education 289-301.

Schwab, J. (1964). The structure of the disciplines: Meanings and significances. In G. W. Ford & L. Pugno (Eds.). The Structure of Knowledge and the Curriculum. pp. 1-30. Chicago: Rand McNally.

Schwab, J. (1969). The practical: A language for curriculum. School Review 78, 1-23.

Seidman, E. (1985). In the Words of the Faculty. San Francisco: Jossey Bass.

Snow, C.P. (1959). The Two Cultures and the Scientific Revolution. Cambridge: University Press.

Stark, J. S. and Morstain, B.R. (1978). Educational orientations of faculty in liberal arts colleges. Journal

of Higher Education, 49(5), 420-437.

Stark, J.S., Lowther, M.A. and Hagerty, B. M. K .(1987). Faculty priorities for professional competence in ten fields of professional study. San Diego, CA: Paper presented to the Association for the Study of Higher Education.

Stark, J.S. , Lowther, M.A. Ryan, M.P. Bomotti, S.S. Genthon, M., Haven, C.L. and Martens, G. (January 1988). Reflections on Course Planning: Faculty and Students Consider Influences and Goals. Ann Arbor, MI: National Center for Research to Improve Postsecondary Teaching and Learning. The University of Michigan.

Toombs, W. (1977-78). The application of design-based curriculum analysis to general education. Higher Education Review, 1, 18-19.

Table 1

Distribution of Faculty Interviews by College Type and Introductory Course

Introductory Course	College type: Doctoral university	Comprehensive colleges	Liberal arts colleges	Community colleges	Total *N*	Average class size	Percent non-lecture courses
Sociology	2	2	3	3	10	57	0
History	2	2	2	2	8	37	0
Biology	2	3	4	4	13	47	0
English composition	2	3	4	5	14	27	54
Literature	2	3	2	5	12	37	42
Mathematics	2	2	4	4	12	37	0
Nursing	2	1	2	6	11	37	0
Business	2	2	2	3	9	47	0
Totals	16	18	23	32	89	37	14
Average class size	57	47	30	37	37		
Percent non-lecture courses	0	13	13	23	14		
Mean college enrollment	16,000	16,130	860	6,690			

Table 2

Demographic Characteristics of Faculty Interviewees

Characteristic	Total (N=86)	Comparison: College type[a] p[d]	Comparison: Academic field p[d]
Age			
M	46	n.s.[d]	n.s.[b]
SD	8		
Years taught college			
M	15	n.s.[d]	n.s.[b]
SD	9		
	Percent[c]		
Sex			
Male	59	0.02	0.01
Female	41		
Years at other work			
None or some	42	n.s.	0.03
Slight	13		
Modest	21		
Much	24		
Rank			
Unranked	24	0.00	n.s.
Lecturer	4		
Instructor	9		
Asst prof	21		
Assoc prof	14		
Professor	28		
Degree			
Bachelor	2	0.00	0.08
Masters	43		
Two masters	8		
Doctorate	47		
Education courses			
None or very few	50	0.05	n.s.
Modest	30		
Much	20		
Instructional workshops			
None or slight	49	n.s.	0.02
Modest	23		
Much	28		
Published teaching material			
None or slight	86	0.04	n.s.
Modest	7		
Much	7		
Published research			
None or slight	77	0.02	0.05
Modest	9		
Much	14		
Presented conference			
None or slight	72	n.s.	n.s.
Modest	21		
Much	7		

[a] Comparisons based on *F*-ratio with *df* = 4,81.

[b] Comparisons based on *F*-ratio with *df* = 7,78.

[c] All categorical comparisons based on chi-square test for independence, degrees of freedom vary.

[d] n.s. = $p > .10$

Table 3

Percent of Faculty Placing Strong or Heavy Emphasis on Specific Course Planning Influences in Open-ended Responses

Influence	Percent	Difference: College type[a] p^c	Difference: Academic field[b] p^c
Student characteristics			
Type	97	n.s.	n.s.
Quality of preparation	60	n.s.	0.03
Effort	25	n.s.	0.05
Discipline substance	52	0.09	n.s.
Textbooks	44	0.00	n.s.
Program or college goals	35	0.00	n.s.
Instructor's background	24	n.s.	n.s.
Relation of field to other fields to life, career, etc.	21	0.06	n.s.
External influences	15	n.s.	0.02
Feedback from previous classes, students, colleagues	12	n.s.	0.09
Mode of inquiry of discipline	11	0.01	n.s.
Views of experts in instruction	8	n.s.	n.s.
Vocabulary/symbolism of discipline	4	n.s.	n.s.

[a] Comparisons based on chi-square test of independence; $df = 4$; $df = 16$.

[b] Comparisons based on chi-square test of independence; $df = 7$; $df = 28$.

[c] n.s. = $p > .10$

Table 4

Relative Importance of Course Planning Influences in Structured Questions

Influence	Mean rating[a]	Difference	
		College type[b] p^d	Academic field[c] p^d
Characteristics of the disicipline	16.4	0.09	n.s.
Own beliefs	15.6	n.s.	0.01
Student characteristics	12.8	n.s.	n.s.
Instructor's own background	12.2	n.s.	0.01
Program goals	9.8	n.s.	0.00
Student's future plans	8.3	n.s.	n.s.
College goals	7.1	n.s.	n.s.
Available resources and facilities	6.0	n.s.	0.00
Instructional expert views	5.7	0.01	0.04
Factors I can't control	5.0	n.s.	n.s.

[a] Minimum rating = 1 point; maximum rating = 100 points.

[b] Comparison based on *F*-ratio with *df* = 4,81.

[c] Comparison based on *F*-ratio with *df* = 7,78.

[d] n.s. = $p > .10$

Table 5

Characterizations of Their Academic Field Preferred by Faculty

Characterization	Preferred characterization	Difference	
		College type[a] p[c]	Academic field[b] p[c]
A set of interrelated concepts and operations	25%	n.s.	0.01
A mode of inquiry	30%	n.s.	0.01
A body of knowledge	22%	0.08	0.00
A group of objects or phenomena to explain	12%	n.s.	0.01
A group of scholars	11%	n.s.	0.00
A set of interrelated interests and values	0%	n.s.	0.01

[a] Comparison based on chi-square test with $df = 4,76$.

[b] Comparison based on chi-square test with $df = 7,73$.

[c] n.s. = $p > .10$

Table 6

Mean Ranking Assigned by Faculty to Each of Six Educational Beliefs

Educational beliefs	Mean ranking[a]	Difference	
		College type[b] p^d	Academic field[c] p^d
Effective thinking	5.4	n.s.	n.s.
Social change	4.4	0.09	n.s.
Systematic instructional process	3.5	n.s.	n.s.
Great ideas/discoveries	3.1	0.00	0.00
Personal enrichment	3.1	n.s.	0.00
Pragmatic constraints	1.6	n.s.	0.03

[a] Minimum ranking = 1; maximum ranking = 6.

[b] Comparison based on *F* ratio with *df* = 4,77.

[c] Comparison based on *F*-ratio with *df* = 7,74.

[d] n.s. = $p > .10$

Table 7

Specific Influences on the Selection of Course Content

Influence	Mean rating[a]	Difference	
		College type[b] p^d	Academic field[c] p^d
Fundamental concept of discipline	14.1	n.s.	0.00
Helps students accumulate knowledge into whole	12.8	n.s.	n.s.
Stimulates search for meaning	12.0	n.s.	0.00
Interrelates concepts into larger whole	11.0	n.s.	n.s.
Useful in solving problems	10.7	n.s.	n.s.
Encourages learning on own	10.0	n.s.	n.s.
Students enjoy topic	9.5	n.s.	n.s.
Based on research concept in field	6.7	n.s.	0.00
Students readily learn	6.6	n.s.	0.05

[a] Minimum rating = 1; maximum rating = 100.

[b] Comparison based on *F*-ratio with *df* = 4,81.

[c] Comparison based on *F*-ratio with *df* = 7,78.

[d] n.s. = $p > .10$

Table 8

Preferred Method of Arranging Course Content for Introductory Course

Method	Mean ranking[a]	First choice	Difference	
			College type[b] p^d	Academic field[c] p^d
Conceptually-based sequence	5.0	48%	n.s.	0.01
Learning-based sequence	4.1	17%	n.s.	0.00
Knowledge utilization sequence	3.5	9%	n.s.	n.s.
Structurally-based sequence	3.3	18%	n.s.	0.00
Knowledge creation sequence	3.1	8%	n.s.	0.01
Pragmatic sequence	2.0	4%	n.s.	n.s.

[a] Minimum ranking = 1; maximum ranking = 6.

[b] Comparison based on *F*-ratio with $df = 4,74$.

[c] Comparison based on *F*-ratio with $df = 7,71$.

[d] n.s. = $p > .10$

Table 9

Correlates of the Ways of Arranging Course Content for Introductory Course

Content arrangement	Sequencing method[a,b]					
	Structurally based	Concept based	Knowledge creation	Learning based	Knowledge use	Pragmatic
Mentions of planning factors						
Choose materials			25			
Set goals/objectives					5	
Mentions of planning influence						
Discipline structure						-25
Student evaluations			-25	21		
Definitions of academic field						
Mode of inquiry			29			-20
Set of values		-25				20
Set of objects to explain	44			-35		
Group of scholars		-30			38	
Body of knowledge		27	-28			21
Interrelated concepts	-30	40	-21			
Specific influences on planning						
Own background	26					
Beliefs about education		-24				
Instructional experts	-21			37		
Constraints			31			
Student plans		26				
College goals						34
Program goals			-29			
Resources/facilities		24				20
Influences on content selection						
Student readiness						30
Fundamental concept			-31			
Stimulate search for meaning		-34			25	
Encourages self-learning		-24				
Problem solving	-20				45	
Educational beliefs						
Social change					28	
Set by others					-32	
Personal enrichment		-22			29	
Discover great ideas	26				-29	
Person/situation factors						
Class size				-28		22
Courses in education	-31			29		
Teaching workshops	-41			35		
Presented conferences		-21		31		
Academic field dummy						
Biology						
Business			-20			
Composition				21		
History	39					
Literature		-35				
Nursing			-34			
Mathematics						

[a] $N = 70$ after listwise deletion of missing values.

[b] Only items with correlations above .20 are shown in table. Decimal points are omitted.

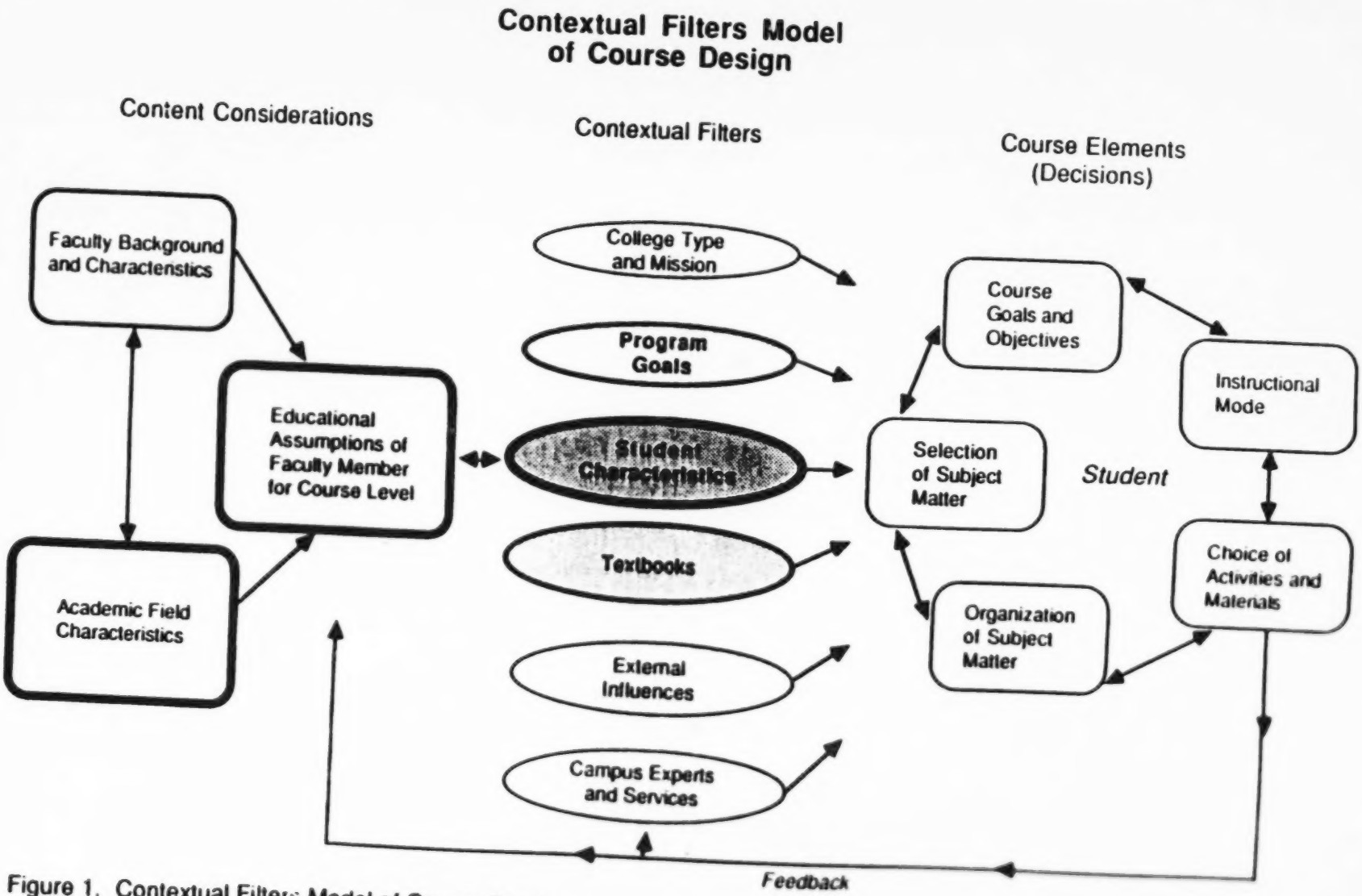

Figure 1. Contextual Filters Model of Course Design.